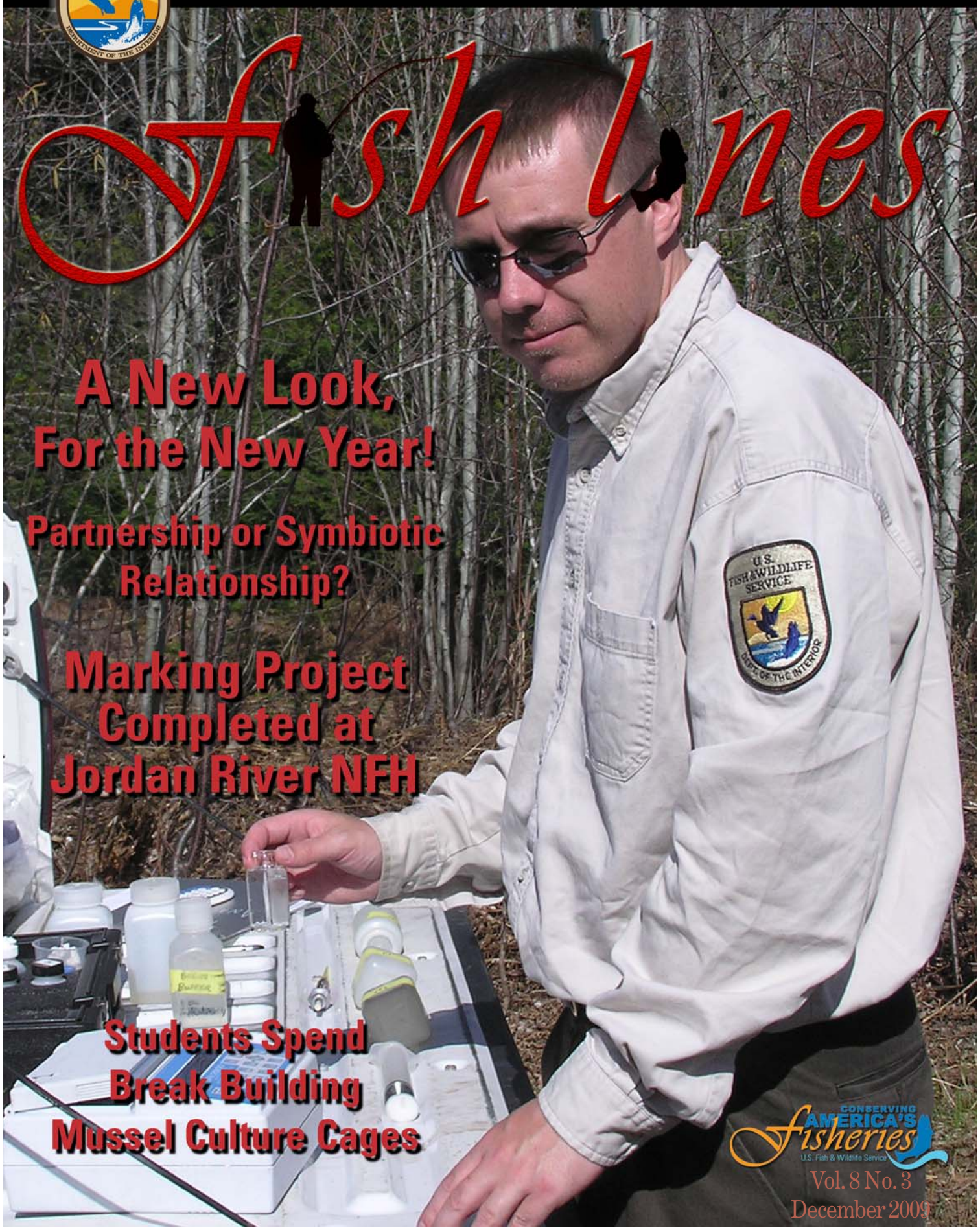
U.S. Fish & Wildlife Service - Midwest Region
Fisheries & Aquatic Resources Program

fish lines



A New Look, For the New Year!

Partnership or Symbiotic Relationship?

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Students Spend Break Building Mussel Culture Cages

Conserving America's Fisheries
U.S. Fish & Wildlife Service
Vol. 8 No. 3
December 2009

Fish Lines

Fisheries & Aquatic Resources Program - Midwest Region

The Mission of the U.S. Fish & Wildlife Service: working with others to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people.

The vision of the Service's Fisheries Program is working with partners to restore and maintain fish and other aquatic resources at self-sustaining levels and to support Federal mitigation programs for the benefit of the American public. Implementing this vision will help the Fisheries Program do more for aquatic resources and the people who value and depend on them through enhanced partnerships, scientific integrity, and a balanced approach to conservation.

Features

-USFWS

Biologist Nick Starzl of the Genoa National Fish Hatchery (NFH) has been selected to be the new assistant manager at the Iron River NFH.

To view other issues of "Fish Lines," visit our website at:
http://www.fws.gov/midwest/Fisheries/library/fishlines.htm

Fish Lines
2010 Vol. 8 No. 3

ASSISTANT REGIONAL DIRECTOR
Mike Weimer

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Phone: 612/713-5111

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Justin Oster performs a tailgate analysis of the lampricide concentration during a recent treatment in a remote stream in the Upper Peninsula of Michigan.

Fish Lines is produced by the Fisheries and Aquatic Resources Program, Region 3, U.S. Fish & Wildlife Service, Ft. Snelling, Minnesota. Items included are selected from monthly reports submitted by Region 3 fisheries offices. Photos included are used by permission and may be copyrighted.

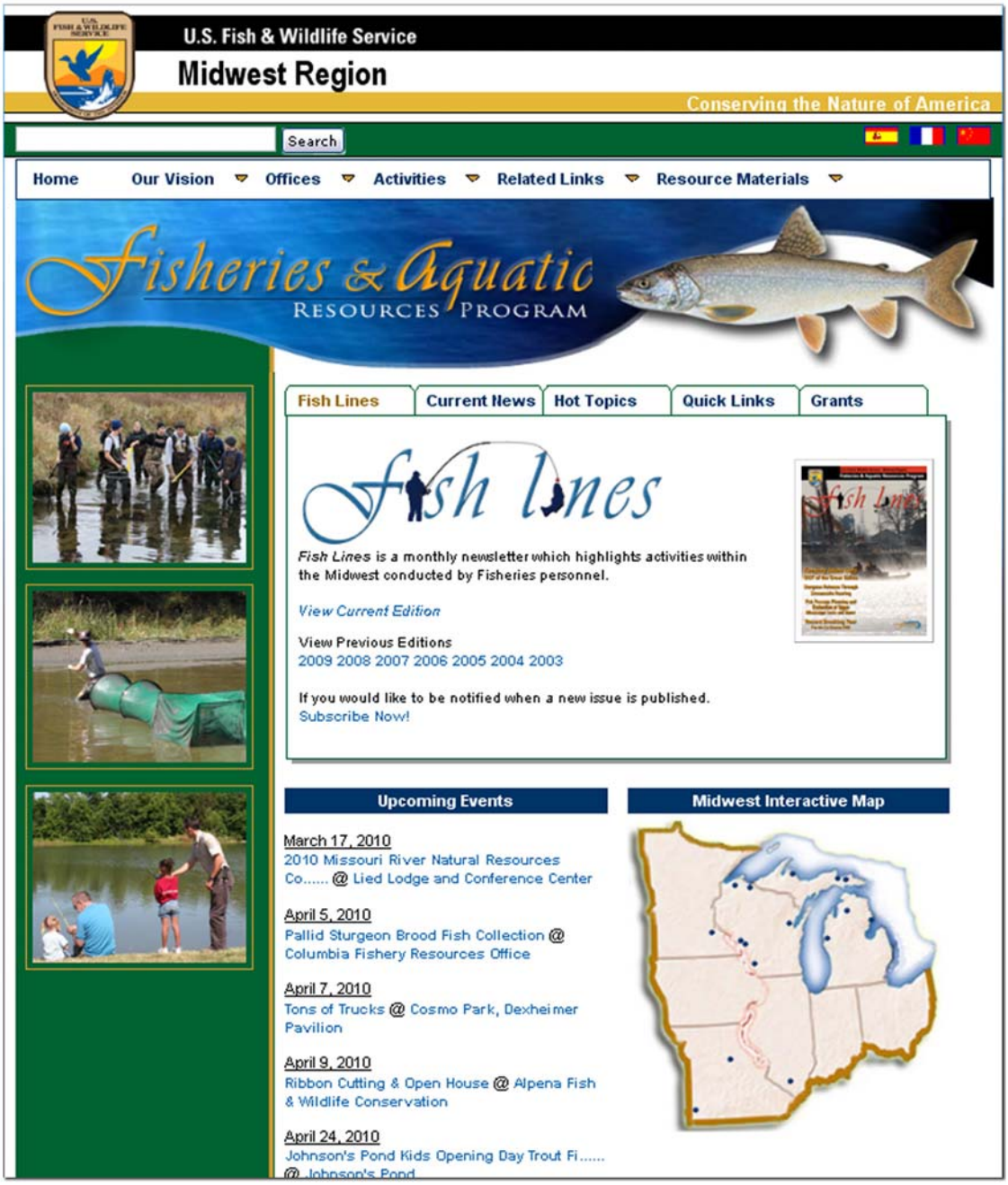
Conservation Briefs 9-21

A New Look for the New Year!

BY KARLA BARTELT, FISHERIES & AQUATIC RESOURCES PROGRAM

The Fisheries & Aquatic Resources Program is excited to announce the launch of their new website at: http://www.fws.gov/midwest/fisheries/.

The new site features a fresh design focused on delivering information in an easy-to-navigate and aesthetically pleasing approach. The fusion of style and content provides quick and easy access to a wide array of Fisheries Program activities, current news, and hot topics, as well as links to partner organizations and other relevant sites. In addition, the site will feature our program's monthly publication, *Fish Lines*, including access to archived editions.



Mike Weimer, Assistant Regional Director-Fisheries said, "The new website puts the Program's best face forward, and will serve as a great source of key information for our partners and the public, in a real-time, visually appealing way."

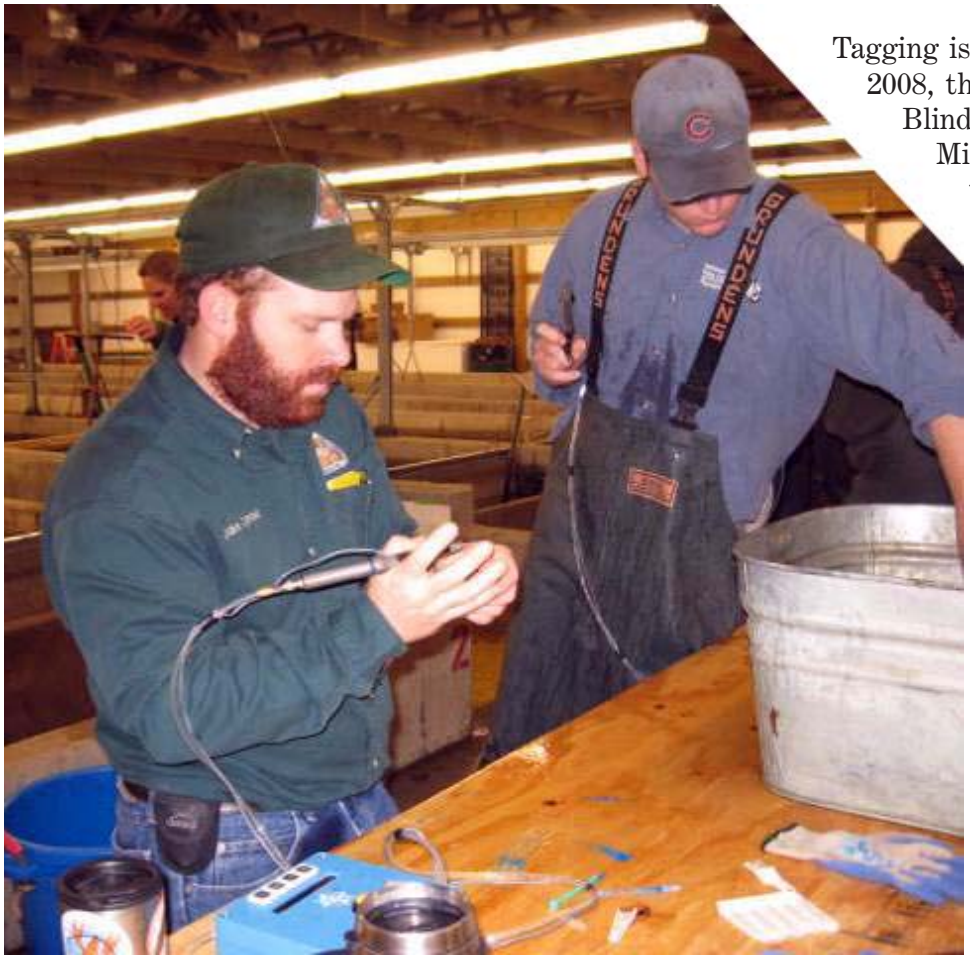
Our "Upcoming Events" section keeps all of our most current events on our home page. It consolidates all the information you would need for an event in one place, including dates, times, images, contact information, maps and directions.

We invite you to review, browse, and experience the site. Your comments, suggestions and feedback are most welcome, as we strive to build a closer relationship between the Fisheries Program and our community. Email us at: midwestfisheries@fws.gov.

Partnership or Symbiotic Relationship?

BY MELISSA CHEUNG, NEOSHO NFH

It's a good thing Neosho National Fish Hatchery (NFH) and Blind Pony State Fish Hatchery (SFH) get along so well. The two hatcheries are part of a bigger partnership that enables the overarching agencies Fish and Wildlife Service and Missouri Department of Conservation respectively, to accomplish mandated objectives. This fall, the two hatcheries spent a lot of time planning and working together. In fact, one might describe our ability to network and call on each other as a symbiotic relationship.



-USFWS

Jake Calhoun of Blind Pony State Fish Hatchery uses the air driven elastomer injection system to tag a pallid sturgeon juvenile.

As members of the Endangered Pallid Sturgeon Work Group, Neosho NFH and Blind Pony SFH have a vested interest in the long-term success of propagated pallid sturgeon. Together, we have worked to refine and improve brood stock spawning techniques for over three years. During that time, we have shared sturgeon eggs, fry, tagging equipment, manpower and species-specific tricks of the trade.

Tagging is always a joint effort. During the fall of 2008, three of the Neosho staff travelled to Blind Pony's facility in Sweet Springs, Missouri, to share our air driven elastomer injection systems and elastomer tagging methodology. Neosho staff helped train Missouri Department of Conservation (MDC) staff and Blind Pony hatchery staff on the efficient elastomer tagging injection systems.

During the spring of 2009, MDC staff from Chillicothe, Missouri, and Neosho's Forestry office helped Neosho NFH tag almost 3,300 pallid sturgeon. Even with their help and that of an additional partner, Nebraska Game and Parks Commission, the tagging lasted two full days.

In November 2009, Neosho NFH's lead biologist Jaime Pacheco assisted Blind Pony SFH in their annual pallid sturgeon tagging event again. Equipped with air driven elastomer injection systems, Blind Pony SFH tagged roughly 6,000 pallid juveniles during a full day of elastomer tagging and scute removals. The elastomer, a silicon-based liquid that solidifies after being injected just below the skin, is used on the pallids to determine hatchery origin in future mark-recapture studies. In addition, the removal of one scute along the side of the fish will tell future biologists finding these fish the year that they were stocked.

It is no exaggeration to say that Neosho NFH will need the assistance of the trained and talented MDC staff to tag their pallid juveniles this spring. In addition to the approximately 3,700 young-of-the-year (YOY) pallids already over-wintering at Neosho NFH, Blind Pony SFH transferred 7,892 more YOY

-USFWS

Last spring, staff from the Missouri Department of Conservation and Nebraska Game and Parks Commission assisted Neosho National Fish Hatchery staff in tagging pallid sturgeon juveniles.

pallid sturgeon to Neosho this November. In total, this amounts to 3.5 times the number of sturgeon Neosho NFH had last year! These fish will all undergo the scute removal, insertion of a passive integrated transponder (PIT) tag, and possibly be elastomer tagged. Their lengths and weights will also be obtained before delivering them to various stocking sites.

-USFWS

This juvenile pallid sturgeon is marked with an orange elastomer tag injected into its rostrum.

This year also marks the very first time that Neosho NFH has five sexually mature female pallid sturgeon with viable eggs on station. Spawning of the adult sturgeon can start as early as 7:00 am and may continue to midnight! We already know that we will call on the expertise and assistance of Blind Pony SFH staff to make it all happen.

-USFWS

A bony plate called a scute is removed from a designated location on the side of this pallid sturgeon which will identify the year the fish is stocked.

The extent of the partnership shared between Blind Pony and Neosho is far-reaching, and not only benefits each facility, but enhances the Endangered Pallid Sturgeon Recovery Program as a whole. So, are we involved in a partnership or constant state of symbiosis? Whatever you decide to call it, it seems to be working and we plan to keep it that way.

For further info about the Neosho NFH: http://www.fws.gov/midwest/neosho/

Marking Project completed at Jordan River NFH

BY TIM SMIGIELSKI, JORDAN RIVER NFH

The 2009 Jordan River National Fish Hatchery (NFH) lake trout marking project began the last week of September and concluded on December 15. Temporary staff marked 1.96 million lake trout fingerlings of three separate strains. About 332,000 fingerlings received adipose fin clips and coded-wire tags (CWT).

The fingerlings were tagged as part of an ongoing development of the autofish trailer technology now available in the Great Lakes basin, which will automate this historically labor intensive project. About 200,000 of the CWT fish are slated for stocking into southern Lake Huron with the remaining CWT fish going to the lake trout refuge in northern Lake Michigan.

-USFWS

Destined for the Great Lakes, this lake trout receives the LP/RV lake wide fin clip (left pectoral and right ventral fins removed) designating it as a hatchery reared fish of the 2009 year class.

Jordan River NFH annually provides nearly two million lake trout yearlings to the Great Lakes rehabilitation efforts in lakes Huron and Michigan. This equates to about 50 percent of the total number of lake trout stocked into the Great Lakes. All stocked lake trout are "marked" by removal of a fin or in some cases multiple fins, to provide a way to identify hatchery reared lake trout and to denote their year class. Fish that are not finclipped with the "lake wide" clip may be injected with CWTs and externally marked with an adipose fin clip.

-USFWS

This is the inside of an automatic fish marking trailer that was used during recent fish marking operations at the Jordan River National Fish Hatchery. The new technology is being perfected to use with lake trout.

For further info about the Jordan River NFH: http://www.fws.gov/midwest/JordanRiver/

Students spend Break Building Mussel Culture Cages

BY TONY BRADY, GENOA NFH

The Student Temporary Employment Program (STEP) is the Fish and Wildlife Service's way to introduce interested college students to careers in conservation. Genoa National Fish Hatchery (NFH) has hired as many as three STEP workers over the last few years. These students typically start work when their summer break begins and work all summer long. Because of this schedule, many people believe this program to be only a summer program; however, the STEP program is a one year appointment, which means a student can work throughout the year when available. Genoa's current STEP students, Brandon Keesler and Sam Stafslien, are making the most of this opportunity to gain fisheries experience and earn a little extra cash.

Keesler and Stafslien spent part of their winter break at the hatchery repairing mussel culture cages. Mussel culture cages are used to house fish that have been inoculated with the parasitic larval form of mussels called glochidia. The glochidia attach to the gills of fish where they undergo a metamorphosis. When the glochidia complete their metamorphosis, they drop off the fish and many will settle into the collection base where they will grow and then are harvested for relocation to restoration areas. These cages have been used with great success for the past eight years in the recovery efforts for the endangered Higgins' eye pearlymussel producing more than 35,000 (2-4 year old) mussels that have been used in re-establishing five different recovery sites.

Student Temporary Employment Program (STEP) employees Sam Stafslien (above) and Brandon Kessler spend their school breaks working at the Genoa National Fish Hatchery building mussel culture cages.

-USFWS photos

The rehabilitation of these cages consists of some welding repair which is done by the hatchery maintenance staff, and then Keesler and Stafslien covered the cage frames with new hardware cloth. In addition to the cages, repair work was also done on the collection bases, on which the cages are attached and where the juvenile mussels settle out and grow. The plywood used in the collection bases were replaced as the original plywood had begun to warp.

With this work completed, the hatchery now has 30 like-new cages and bases ready to be deployed this spring to culture a new cohort of freshwater mussels that in years to come will be used to re-establish mussel populations in the Upper Mississippi River watershed.

For further info about the Genoa NFH: http://www.fws.gov/midwest/genoa/

Sea Lamprey Coordination

BY SEA LAMPREY BIOLOGICAL STATION STAFF

Partnerships are essential for effective fisheries conservation. Many agencies, organizations, and private individuals are involved in fisheries conservation and management, but no one can do it alone. Together, these stakeholders combine efforts and expertise to tackle challenges facing fisheries conservation. The success of these partnerships will depend on strong, two-way communications and accountability.

Personnel from the Fish and Wildlife Service, Department of Fisheries and Oceans Canada and the U.S. Geological Survey Upper Mississippi River Environmental Science Center attended the annual Sea Lamprey Management Standard Operating Procedures working group meeting in Escanaba, Mich. December 8-9. Sea Lamprey Management personnel from Ludington and Marquette, Mich. and Sault Ste. Marie, Ontario, along with cooperators from La Crosse, Wis., were represented. The group meets annually to discuss and document changes to the Sea Lamprey Management Standard Operating Procedures manual in order to maintain lampricide registration as required by the Environmental Protection Agency.

-USFWS/KathyHahka

Personnel from the Fish and Wildlife Service, Department of Fisheries and Oceans Canada and U.S. Geological Survey Upper Mississippi Environmental Science Center attended the annual Sea Lamprey Management Standard Operating Procedures working group meeting in Escanaba, Michigan.

The group discussed the status of Sea Lamprey Management's existing lampricides and their effect on sea lamprey mortality at different times of the year along with the minimum lethal concentration prediction chart that is currently used. The topics of field toxicity tests utilizing sturgeon, biological treatment collection protocols, stream pH suppression during chemical treatments, and purchase of additional scientific instruments were also discussed. The group then undertook the tedious but necessary task of working through the manual page by page to determine the necessity of any documentary changes. This year's meeting was perhaps the best ever because of the number of topics discussed along with the ensuing lively conversations.

The sea lamprey management program continues to work closely with partners to control populations of sea lampreys in tributaries of the Great Lakes to protect the fishery and related economic activities in the basin (an estimated annual benefit of $7 billion/year to the region). The Fish and Wildlife Service delivers a program of integrated sea lamprey control in United States waters of the Great Lakes in partnership with the Great Lakes Fishery Commission.

For further info about the Ludington Biological Station: http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/ludington.pdf

Parry Sound Lake Trout Brood Stock have Arrived

BY CRYSTAL LEGAULT-ANDERSON, PENDILLS CREEK NFH

Three year classes of Huron Parry Sound Wild (HPW) strain of lake trout arrived at Sullivan Creek National Fish Hatchery (NFH) during September 2007, September 2008 and October 2009. During the fall of 2005, 2006 and 2007, biologists from the Fish and Wildlife Service and Ontario Ministry of Natural Resources (OMNR) collected a small group of eggs from wild Parry Sound lake trout. HPW brood stock were held at Chatsworth, Ontario, undergoing intensive fish health sampling prior to importation into the United States to ensure the Parry Sound fish were free of Viral Hemorrhagic Septicemia (VHS). Finally, pathology reports proved negative for VHS and other certifiable diseases, and annual dates were chosen for the transfer of the Parry Sound fish from Chatsworth to Brimley, Mich. Now, all three year classes are being cared for at Sullivan Creek NFH. These lake trout will also serve as a backup to the OMNR's own lines of Parry Sound fish, in case of a disease outbreak or some unforeseen circumstance. If all goes well, the first lake trout yearlings of this strain could be stocked as early as 2013.

For further info about the Pendills Creek NFH/Sullivan Creek NFH: http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/pendills.pdf

Construction Progress of the Neosho NFH Visitor Center

BY MELISSA CHEUNG, NEOSHO NFH

After months of site preparation and foundation work, framing of the visitor center building started in November at the Neosho National Fish Hatchery (NFH). Within three weeks, framing on the second story had begun. Currently, the Amish workers are 90% finished with framing. An article about their industrious work will be published in the Neosho Daily News. The article will be posted on the hatchery blog once it is printed.

The entire building is close to being "dried-in." For those like myself who are not accustomed to this technical jargon, that means windows will be installed, roof construction completed, and Tyvek, the weatherization barrier that looks like wrapping paper on a building, will cover the building's exterior walls. The heating, ventilating and air conditioning (HVAC) is currently roughed in, as is the main piping for plumbing and electrical conduit. The employee wood stairs are now in use and the metal pan filled concrete stairs are complete. Decorative soffit framing has started and the exhibit area is starting to take shape. The partial wrap-around patio will now keep the workers dry.

-USFWS/MelissaCheung

Construction of Neosho National Fish Hatchery's new visitor center is well underway. The dome being constructed on the left will be installed above the elevator shaft.

For further info about the Neosho NFH: http://www.fws.gov/midwest/neosho/

2009 Mark Twain Lake Managed Deer Hunt

BY CLAYTON RIDENOUR, JOE MCMULLEN AND JONATHAN SPURGEON, COLUMBIA FWCO

Biologists and technicians traded in their rain suits and nets for insulated coveralls and blaze orange to assist people with disabilities during a managed deer hunt at Mark Twain Reservoir in northeast Missouri. Applications to participate in the hunt were submitted by hunters with disabilities to the U.S. Army Corps of Engineers' (Corps) Project Office at Mark Twain Reservoir during August 2009; watch the following web address during summer 2010 for applications to hunt the 2010 season: http://www.mvs.usace.army.mil/Marktwain/. Thirty-two hunters from throughout Missouri, as well several out-of-state hunters, took part in the 21st annual two-day hunt. The hunt is an important land management tool used by Corps' Park Rangers to reduce damage to forest lands caused by an overly abundant deer population at Mark Twain Lake.

Columbia FWCO's Clayton Ridenour, Joe McMullen and Jonathan Spurgeon with Missouri Department of Conservation's Chris McLeland participated in the event by guiding hunters to pre-set wheelchair-accessible hunting blinds deep in the forest. Each hunter used cellular phones to maintain contact with a base camp for regular safety check-ins and support. We helped hunters move among blinds, track deer that had been shot, and accommodated hunters as best possible.

Though this special event was concurrent with the Missouri firearms deer season when the center fire rifle is a legal method, hunters were limited to shotgun or "smoke-pole" (i.e., muzzleloader) methods during the hunt. It's clear that hunters didn't allow this to limit their hunting success, as there were 23 deer harvested from the 3,200 acre managed hunt area. This event was a vehicle for the participants, many of which were first time hunters, to gain a feeling of pride and accomplishment from an outdoors experience.

The Fish and Wildlife Service worked alongside nearly 100 other volunteers to help make this event a

success. Among those were volunteers representing the Paris Lion's Club from Paris, Mo. and sportsmen clubs from both Missouri and Illinois. Equipment to transport hunters was donated by local businesses and abundant food, including an excellent homemade thanksgiving dinner, was prepared and donated to the camp by several families and clubs. Many volunteers make this event a regular part of their deer seasons and have been assisting with the event for each of the last 21 years. Volunteer efforts did not go unrecognized by the hunters who continually expressed their appreciation. This unique outreach opportunity to persons with disabilities illustrates the Fish and Wildlife Service's mission to work with others and our commitment to the continuing benefit of the American people.

-USFWS/JoeMcMullen

Biologist Clayton Ridenour (left), hunter Dennis Routt (far right), and Lion's Club volunteers from Paris, Missouri, admire the morning's double harvest during the Mark Twain Lake managed deer hunt.

For further info about the Columbia FWCO: http://www.fws.gov/midwest/columbiafisheries/

Concord Montessori and Community School Students sayMath and Science and Physics; Oh MY!?

BY TIM SMIGIELSKI, JORDAN RIVER NFH

More than 20 students from Concord Charter School visited the Jordan River National Fish Hatchery (NFH) in December as part of their ongoing participation in the "Imaginature" and "Baby Brookies" programs. The programs provide hands-on experiences for students, matching up activities with curriculum concepts or current lessons in science and math. In this case, the students were studying "eggs." Since we were currently incubating over five million lake trout eggs, it was the perfect time for their visit. Biologist Tim Smigielski explained the egg take and incubation process. Each student was able to witness eggs incubating and sac fry hatching. The class assisted with removing a small amount of eggs from a hatching jar. The class also learned how hatchery staff measure egg size.

They also learned to use a burette and read a graduated cylinder. The class then calculated the number of eggs per milliliter by displacement of water in the burette. These students are in grades one through four! One of the parents commented, "What a valuable experience for kids at such an early age!" Outdoor and Environmental education coordinator Eric Schupbach of Concord promotes these repetitive hands-on experiences, and continues to provide opportunities for his students to increase their scientific and mathematic literacy through the programs delivered at Jordan River NFH.

-USFWS

Biologist Tim Smigielski explains egg incubation to Concord Charter School students.

For further info about the Jordan River NFH: http://www.fws.gov/midwest/JordanRiver/

Coaster Brook Trout Brooders Transferred from Genoa NFH

BY JENNIFER BAILEY, GENOA NFH

Two coaster brook trout brood lots were transferred from Genoa National Fish Hatchery (NFH) to Iron River NFH this month. Iron River NFH houses brood stock developed from remnant wild populations in Tobin Harbor and Siskiwit Bay at Isle Royale National Park for coaster brook trout rehabilitation in Lake Superior. The yearling brook trout were hatched and raised at Genoa NFH, passed disease testing hurdles, and will now join the ranks of other brood stock lots at Iron River NFH.

-USFWS

The beautiful coaster brook trout is cultured at the Genoa National Fish Hatchery for stocking and future brood stock programs.

Progeny of these brood fish will be stocked in Grand Portage Bay, Pictured Rocks National Lake Shore and Keweenaw Bay to help restore coaster brook trout to their historic range. By infusing the brood stock program with new brooders, program biologists help encourage genetic variation in the population. Having a variety of genetics to draw from is like having an internal survival kit or "toolbox" for stocked fish. A good genetic "toolbox" may increase survivability in the wild and help fish adapt to changes in the Great Lakes ecosystem.

In addition to producing new brood stocks for coaster brook trout rehabilitation in Lake Superior, conservation partners have created laws to protect coasters from overharvest, removed dams that block wild fish from spawning sites, and supported rehabilitation projects to restore habitat in spring-fed spawning streams in state, federal and tribal waters.

The Fisheries Program maintains and implements a comprehensive set of tools and activities to conserve and manage self-sustaining populations of native fish and other aquatic resources. These tools and activities are linked to management and recovery plans that help achieve restoration and recovery goals, provide recreational benefits, and address Federal trust responsibilities. Sound science, effective partnerships, and careful planning and evaluation are integral to conservation and management efforts.

For further info about the Genoa NFH: http://www.fws.gov/midwest/genoa/

Lake Trout Egg Transfers from Sullivan Creek NFH

Sullivan Creek National Fish Hatchery (NFH) transferred over 4.5 million eyed lake trout eggs to Iron River NFH, Jordan River NFH, Pendills Creek NFH and Marquette State Fish Hatchery this year, predominately of the Seneca Lake Wild strain. Eggs were spawned from the females, fertilized with milt from the males and then incubated at Sullivan Creek NFH until they developed into "eyed" eggs, where the eye of the developing young fish can be seen inside the egg. Once the eggs are eyed they are shocked to make the unfertilized eggs turn opaque, and then processed through automatic egg pickers which separate the good eyed eggs from the bad opaque eggs. Sullivan Creek NFH is a dedicated lake trout brood stock facility and provides eggs to federal, state and tribal agencies to help rehabilitate lake trout populations in the Great Lakes.

Sullivan Creek NFH Harassed by Beavers!

BY JAIME MASTERSON, PENDILLS CREEK NFH

This past September and October, Sullivan Creek National Fish Hatchery (NFH) was severely harassed by nuisance beavers. The hatchery receives 100% of its water supply from surface water and does not have any well water supplies established like some facilities. So, when a beaver shows up and settles into the area it can have a crippling effect on the entire hatchery! This past year, Sullivan Creek had minor beaver issues above the hatchery, and for the first time ever, that anybody can remember that has ever worked here, a beaver issue below the hatchery. Since the hatchery sits on seven acres in the middle of the Hiawatha National Forest in the Eastern Upper Peninsula of Michigan, anytime there are issues that affect the hatchery outside those seven acres, the hatchery needs to contact the United States Forest Service and wait for guidance and/or permission to confront the pressing issue that affects the hatchery.

In September, Sullivan Creek NFH biologist James Anderson noticed that the water depth of the hatchery effluent was at an elevated level! Upon further inspection, a fairly large beaver dam was found one hundred yards below the hatchery. The dam measured roughly ten feet in length and four feet high and four feet wide. Biologist Anderson contacted Pendills Creek NFH, which is the main office for Sullivan Creek, and informed project leader Curt Friez of the critical situation. Curt then contacted the Forest Service and waited for guidance on the issue, as is laid out in the Memorandum of Understanding (MOU) that was established between the two organizations. The Forest Service determined that since the dam was not near the road, they could not get any heavy machinery close enough to remove the dam, so the hatchery could go ahead and remove it by hand. The Forest Service also advised us to contact the Michigan Department of Natural Resources (DNR) to obtain a Damage and Nuisance Animal Control Permit.

On September 29, 2009 the Michigan DNR issued a permit to the hatchery for the nuisance beavers. Once the permit was in hand, the hatchery formed a game plan to attack the dam below the hatchery. Biologist Anderson determined that the heart of the beaver dam was a ten inch balsam pine tree running the entire length of the dam. On September 30 the hatchery was ready to launch their assault on the beaver dam below the hatchery. With pick-ax, hoe, gravel rake and chainsaw in hand, assistant project leader Crystal LeGault-Anderson, animal caretaker Tony Wizauer and biologist James Anderson tore into the beaver dam and proceeded to get very wet! After that, once a week for about one month, Anderson and Wizauer along with several volunteers that where at the hatchery for spawning season would tear apart any attempt the beaver had made to repair the dam.

With the constant harassment the hatchery personal placed on the dam below the hatchery, the beaver moved above the hatchery to the intake area. The beaver tried building a dam right at the hatchery intake structure and every day the hatchery personnel would have to remove the constructed debris from the intake. The beaver then moved above the intake to where the sheet piling starts and again, the hatchery personnel had to remove debris on a daily basis. The beaver even tried building a dam right below the hatchery spillway!

Sullivan Creek has had minor beaver issues above the hatchery before, but the beavers were either trapped out or taken out by large predators that live in the Delirium Wilderness which is adjacent to the hatchery. After the beavers were removed, the dams were destroyed by hand or opened enough to create a natural flow again. A local trapper that the hatchery contracts with harvested four of five beavers at Sullivan Creek this year during the regular trapping season. The last beaver, which is below the hatchery, is a very educated beaver, the trapper indicated, mainly from all the harassment that the beaver received. Anytime he tried to set a trap, the beaver would divert around the disturbed area, even though the trapper did not make much sign, the beaver would be very wary of the area the trapper had been.

For further info about the Pendills Creek NFH/Sullivan Creek NFH: http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/pendills.pdf

Biologist seeks Single Sea Lampreys in the St. Marys River

BY JESSICA BARBER, MARQUETTE BIOLOGICAL STATION

If you are a sea lamprey that likes moonlit swims up the Rock Cut or North Channel, likes playing chicken with enormous Great Lakes freighters, and love playing hide and seek with the sea lamprey management program, then I am your biologist. Call me!

-USFWS

Invasive adult sea lampreys are removed from a trap on the St. Marys River as one of the techniques used to control the number of Lake Huron spawning-phase lampreys.

The sea lamprey is a destructive invasive species in the Great Lakes that contributed to the collapse of lake trout and other native species in the mid-20th century and continues to threaten efforts to restore and rehabilitate the fish community. The sea lamprey management program is administered by the Great Lakes Fishery Commission and its two control agents, the Fish and Wildlife Service and Department of Fisheries and Oceans Canada. The program is a critical component of fisheries management in the Great Lakes because it significantly reduces the mortality of Great Lakes fish caused by the feeding of parasitic sea lamprey, thereby facilitating the rehabilitation of important fish stocks.

Imperative to controlling Lake Huron spawning-phase sea lamprey numbers is the integrated management strategy utilized on the St. Marys River. A combination of trapping, sterile-male releases, and bayluscide (a sea lamprey toxicant) spot treatments are conducted annually to suppress reproduction and survival in the St. Marys River. Sea lamprey trapping operations are conducted at hydropower plants in United States and Canadian waters during June and July.

In 2009, 5,630 sea lampreys were captured in assessment traps at the U.S. Army Corps of Engineers powerhouses, the Edison Sault Electric powerhouse and the Brookfield Renewable Power facility. A mark-recapture study was also conducted during 2009 with a resulting population estimate of 13,424 sea lampreys and a trapping efficiency of 42%. The Fish and Wildlife Service traps alone captured 14% of the population which was among the five highest years on record over a 20+ year time-series.

So, shmoopsy (i.e. sea lamprey), while I enjoy your playful games of hide and seek, the lack of communication can be quite frustrating. You seldom call to let me know where you are and when you do call, you are very cryptic. This relationship needs to be a lot more give and a lot less take from your perspective – I need more! The sterilization program needs more male sea lampreys to sterilize and the Great Lakes fishes are begging for a reprieve from your evil ways. Each year, we investigate numerous ways of capturing more sea lampreys in the St. Marys River. New traps, old traps, new locations, old locations, lights, pheromones, telemetry, rotary screw traps, attractants/repellants, more flow, less flow, midnight trap checks, dawn trap checks, standing on our heads – you name it, we are trying it. So help me out here! The lamprey love line is open and I am anxious to put this all behind us.

Aquatic Invasive Species

Aquatic invasive species are one of the most significant threats to fish and wildlife and their habitats. Local and regional economies are severely affected with control costs exceeding $123 billion annually. The Fisheries Program has focused its efforts on preventing introductions of new aquatic invasive species, detecting and monitoring new and established invasives, controlling established invasives, providing coordination and technical assistance to organizations that respond to invasive species problems, and developing comprehensive, integrated plans to fight aquatic invasive species.

For further info about the Marquette Biological Station: http://www.fws.gov/midwest/marquette/

Carterville's Carp Filled Field Season

BY BRAD ROGERS, CARTERVILLE FWCO

Over the past year, Carterville Fish and Wildlife Conservation Office's (FWCO) management of Asian carp has been extensive. From implementing the management plan to tagging and tracking; from sampling with traditional fishery gears to using rotenone to fend them away from the Great Lakes; the staff at Carterville FWCO have invested their time and skills in every aspect of this invasive species issue. As the year comes to an end, so does a long and exhausting field season.

The year started out in April with monthly monitoring for Asian carp in the Brandon Road and Lockport Pools on the Upper Illinois Waterway. These scheduled visits were to monitor the presence of silver and bighead Carp via electrofishing and netting in areas where they had not previous been detected—they would remain undetected until later in the year. As the weather started to heat up, so did the action on the river. We teamed up with the U.S. Army Corps of Engineers (Corps) on a telemetry project to monitor the movements of silver and bighead carp throughout four pools on the Upper Illinois Waterway. Ultrasonic tags were surgically implanted into carp and those fish were tracked each month through November using mobile and stationary telemetry methods. In the midst of the tagging season, we teamed up with Zeb Hogan, the host of National Geographic's "Hooked", to film a segment for an upcoming show. After a long day of electrofishing, flying fish, and some surgery, the carp-slime covered National Geographic crew walked away with a much better understanding of the problems these fish are causing.

With the discovery of Asian carp DNA in Brandon Road pool, we were sent out at the Corps request, to try to verify the findings. Seemingly endless hours of shocking turned over one silver carp in Brandon Road pool which, unfortunately, was not captured. Shocking and netting continued for several weeks through the fall but failed to produce any more Asian carp, leading to the assumption that very few were present. While sampling in the area, we also assisted Notre Dame with their water sampling for environmental DNA analysis. While this provided only a short break from the long periods of electrofishing, driving the geneticists around for a half day to collect bottles of water was a welcome break from our sampling.

We wrapped up the season in December with our participation in the rotenone project on the Chicago Sanitary and Ship Canal. There was a bittersweet sense of satisfaction as the lone Asian carp captured lay in the bottom of the very boat that had spent countless hours on the water this year in search of it and others.

With everything said and done, some staff members of the Carterville office had spent a full five months away from home this year working on Asian carp and various other projects. Needless to say, they are ready for some serious "R and R" but will be ready to face the New Year refreshed and ready to take on whatever the carp throw at them.

For further info about the Carterville FWCO: http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/carterville.pdf

Agents Wrap Up 2009 Spawning-Phase Sea Lamprey Trapping

The Sea Lamprey Control Program conducts an assessment of spawning-phase sea lamprey populations to determine the long-term effectiveness of sea lamprey management actions throughout the Great Lakes. During 2009, assessment traps were placed in 55 tributaries of lakes Superior, Michigan, Huron, Erie and Ontario. There were 44,600 adult sea lampreys captured (Lake Superior – 3,900; Lake Michigan – 19,400; Lake Huron – 19,500; Lake Erie – 600; Lake Ontario – 1,200).

The sea lamprey management program continues to work closely with partners to control populations of sea lampreys in tributaries of the Great Lakes to protect the fishery and related economic activities in the basin (an estimated annual benefit of $4-6 billion/year to the region). The Fish and Wildlife Service delivers a program of integrated sea lamprey control in the United States waters of the Great Lakes as a contract agent of the Great Lakes Fishery Commission. For more information, contact Jessica Barber at 906/226-1241.

Sullivan Creek NFH Releases Excess Lake Trout Brood Stock

BY JAIME MASTERSON, PENDILLS CREEK NFH

When the Sullivan Creek National Fish Hatchery (NFH) has excess lake trout brood fish, the hatchery partners with the Michigan Department of Natural Resources (DNR) to locate inland lakes which have the essential habitat base and depth required by our large lake trout.

Between October and November 2009, the staff of Sullivan Creek and Pendills Creek NFHs along with assistance of a fish distribution truck from Jordan River NFH released 1,820 excess lake trout brood stock into six different inland Michigan lakes. The excess lake trout included two different strains and five different year classes. The two different strains were Seneca Lake Wild and Huron Parry Sound Wild and consisted of five different year classes being 2001, 2006, and 2007 Seneca Lake Wild and 2005 and 2006 year classes of Huron Parry Sound Wild. The 2001 Seneca's averaged 9.16 pounds and 27.29 inches, the 2006 Seneca's averaged 1.63 pounds and 15.78 inches, and the 2007 Seneca's coming in at 45 fish/pound and 4.50 inches in length. The 2005 Parry Sounds averaged 2.40 pounds and 17.85 inches, with the 2006 Parry Sounds averaging 1.21 pounds and 14.42 inches.

The mass exodus began on October 26 with 150 of the 2001 year class of Seneca Lake wild brood fish being stocked into Sporley Lake in Michigan's Marquette County. This is the second year in a row that Sporley Lake has received lake trout from Sullivan Creek NFH. Drivers on this day were biologists James Anderson and Jaime Masterson. The exodus continued the next day with 190 fish from the 2001 Seneca Lake Wild brood stock headed for Avalon Lake in Michigan's Montmorency County. Anderson and Masterson where again selected for driving duty. Thanks to the Michigan DNR, when the two arrived at Avalon Lake the local paper was waiting along with the president of the lake resident's sportsmen group. An article was later published in the Montmorency County Journal about the release of the 190 lake trout brood stock. Two days later on the October 29, 75 fish from the 2001 Seneca Lake wild year class were loaded up and released into Long Lake in Michigan's Iron County. This day only one truck was used with Anderson performing the driving duties and spawning volunteer Tim Falconer from the Ludington Biological Station taking part in the "ride along program" to assist with the stocking effort.

On November 2, Maceday Lake in Michigan's Oakland County received 100 – 2006 year class and 300 – 2007 year class of Seneca Lake Wild lake trout along with 100 – 2005 year class and 500 – 2006 year class of Huron Parry Sound Wild fish. Drivers for this day again were Anderson and Masterson. When the drivers arrived at the lake, the Michigan DNR was waiting to help assist with the stocking along with the Oakland County Press to witness the event. An article and video were later posted to the Oakland County Press web page on the stocking of the excess lake trout and the joint venture between the Fish and Wildlife Service and the Michigan DNR to bring these fish to Maceday Lake. This is the second time in three or four years that Sullivan Creek NFH has stocked Maceday Lake with lake trout brood stock.

Then on November 4, the hatchery loaded up 250 of the 2001 Seneca Lake Wild year class and headed for Gull Lake located in Michigan's Kalamazoo County. Anderson and Masterson again provided driving duties for the stocking effort. When the drivers arrived at the lake, the Michigan DNR was waiting with two personnel to assist with the stocking. Again, this is the second time in three or four years that Sullivan Creek has stocked Gull Lake with lake trout brood stock. Finally on November 10, the last of the 2001 Seneca Lake Wild year class, which totaled 155 fish, were loaded up and headed for Thumb Lake in Michigan's Charlevoix County. Drivers on this day were Anderson and assistant project leader Crystal LeGault-Anderson. After the fish were released, the drivers headed to Jordan River NFH to return the Jordan River fish truck, since this was the last trip for stocking the excess brood stock.

If you think about it and looked on a Michigan map, just about every corner of the state of Michigan received excess lake trout from Sullivan Creek NFH this past fall.

As the population in the United States continues to grow, the potential for adverse impacts on aquatic resources, including habitat will increase. At the same time, demands for responsible, quality recreational fishing experiences will also increase. The Service has a long tradition of providing opportunities for public enjoyment of aquatic resources through recreational fishing, habitat restoration, and education programs and through mitigating impacts of Federal water projects. The Service also recognizes that some aquatic habitats have been irreversibly altered by human activity (i.e. - dam building). To compensate for these significant changes in habitat and lost fishing opportunities, managers often introduce non-native species when native species can no longer survive in the altered habitat.

For further info about the Pendills Creek NFH/Sullivan Creek NFH: http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/pendills.pdf

Early Snow Brings Snowmobile Visitors to Jordan River NFH

BY TIM SMIGIELSKI, JORDAN RIVER NFH

Snow! Snow! And lots of it, has been deposited in northern Michigan since early December. By the second week in December, the snowmobilers were out in full force in the beautiful Jordan River Valley.

-USFWS

Snowmobilers in the beautiful Jordan River Valley receive a warm welcome at the Jordan River National Fish Hatchery.

The Jordan River National Fish Hatchery (NFH) welcomes the sleds through a route along the hatchery fence line that leads to the parking lot. Clean bathrooms, hot chocolate, coffee, cider and tea are available in the visitor center. The center remains open 24 hours a day seven days a week. This hospitality is made possible through support by the hatchery Friends Group and a partnership with the local snowmobile club. The hatchery visitor center is an attractive stop along the trail. Interpretive materials, displays and tours are enjoyed by the sledders. It is not uncommon to average 150 snowmobile visitors in a weekend. Near the end of February, the local snowmobile club and the Friends Group plan a "bean pot" social event and outreach opportunity at the hatchery. So, stay tuned for the fun!

For further info about the Jordan River NFH: http://www.fws.gov/midwest/JordanRiver/

Sturgeon in the Classroom at Viroqua Elementary School

BY JORGE BUENING, GENOA NFH

A new outreach program has been established between the Viroqua Elementary School and Genoa National Fish Hatchery (NFH). This program is called "Sturgeon in the Classroom" and provides the 1st grade classes of Brian Buening and Lori Lomas with an aquarium system and an interesting fish species called a lake sturgeon.

The lake sturgeon has been cultured at Genoa NFH since 1995 with production numbers between 30,000 and 40,000 fish annually. This production is needed to help restore populations that have declined due to over-harvest and habitat manipulation through dam construction. The lake sturgeon is a prehistoric fish armed with protective scutes or plates down their backs. They are mainly bottom feeders but are sure to excite the students when they swim up the side of the tank and show off that beautiful smile.

The lake sturgeon arrived December 17 to meet their excited classmates. While waiting for the aquariums to be set up, the students spent an hour asking questions about fish and the hatchery. They also learned how to take care of and named their new class pets. Mrs. Lomas' class decided on "Spike" and Mr. Buening's "Swimmy."

Genoa NFH hopes that by allowing children to interact with live animals at a young age will create a spark that will ignite them into being more conservation minded adults. Genoa NFH hopes that having a sturgeon in the classroom will provide the teachers with new avenues to make the learning experience more interactive for their students. As part of this program, the classes will visit the hatchery this spring and see the production facilities at Genoa NFH firsthand. They will also tour the Sense of Wonder Discovery Wetland part of the hatchery's outdoor classroom where they can discover what wildlife can be found on a simple nature walk.

-Ron Everhartt

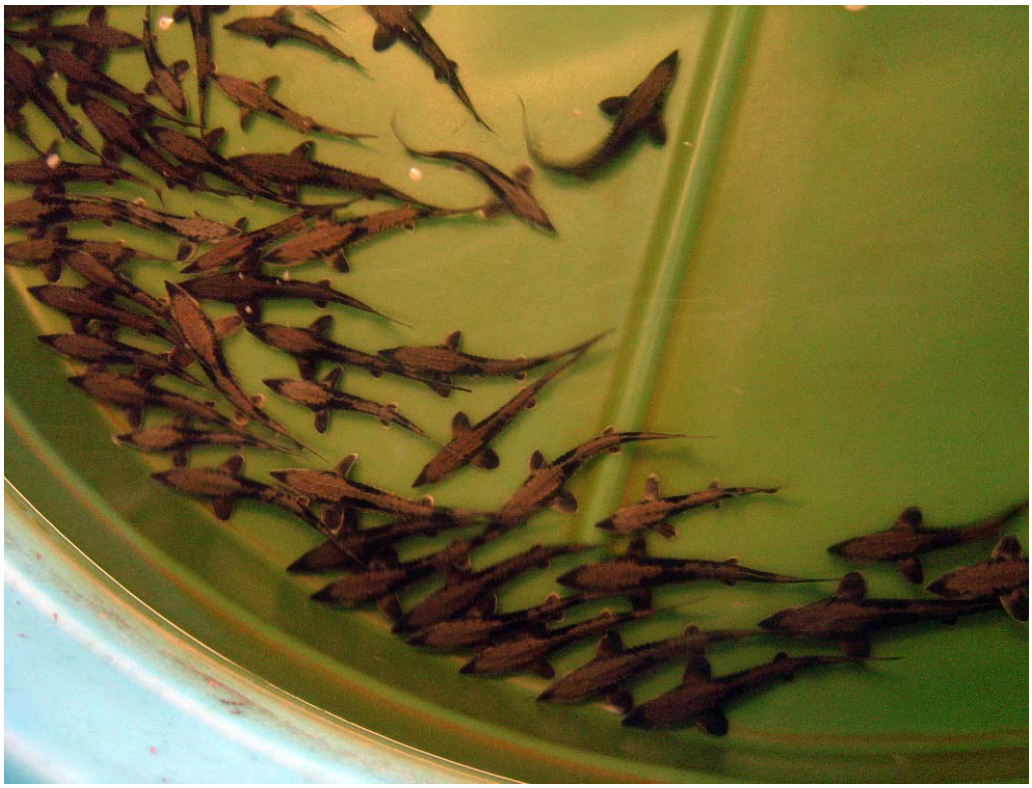
For further info about the Genoa NFH: http://www.fws.gov/midwest/genoa/

Genoa NFH provides Lake Sturgeon for VHS Research

BY JAMES LUOMA, GENOA NFH

Science and technology form the foundation of successful fish and aquatic resource conservation and are used to structure and implement monitoring and evaluation programs that are critical to determine the success of management actions. The Service is committed to following established principles of sound science.

Researchers from Michigan State University (MSU) are studying Viral Hemorrhagic Septicemia (VHS) strain IVb which has been responsible for numerous fish kills in the Great Lakes region in the past several years. The arrival of strain IVb VHS into the Great Lakes basin and its ability to cause mortality in a broad range of fish has resulted in many states and the Animal and Plant Health Inspection Service (APHIS) to implement strict testing and transportation guidelines to reduce the probability of unintentional disease introduction into uninfected waters. The researchers are studying the VHS strain IVb susceptibility in juvenile fishes and their antibody response to the exposure. Knowledge gained from the research will further the scientific understanding of various fishes immune response to VHS and potentially it could be used identify populations that have been exposed to VHS.



-USFWS

Lake sturgeon cultured at the Genoa National Fish Hatchery support numerous restoration plans and research projects.

The Fish and Wildlife Service and Genoa National Fish Hatchery (NFH) have a continuing commitment to conduct and/or facilitate scientific research activities that will allow for a better understanding of our ecosystems and how to effectively manage them. The Genoa NFH annually produces approximately 40,000 seven inch lake sturgeon fingerlings for restoration programs in several state and tribal waters. Due to the commitment to advance scientific knowledge and the very limited sources of lake sturgeon, fish that are produced in excess of management goals are made available for research activities. The Genoa NFH recently transferred 200 excess juvenile lake sturgeon to MSU for VHS research. The fish have adapted to their new home at MSU and they will be soon used in VHS strain IVb research.

For further info about the Genoa NFH: http://www.fws.gov/midwest/genoa/

Sullivan Creek NFH provides Fish to the Great Lakes Science Center

BY JAIME MASTERSON, PENDILLS CREEK NFH

On September 22, Sullivan Creek National Fish Hatchery (NFH) provided 130 lake trout brood stock from the 2006 year class of Seneca Lake Wild strain of lake trout to the U. S. Geological Survey Great Lakes Science Center for a research project. The fish were loaded up and Sullivan Creek NFH biologist James Anderson fulfilled the driving duties to deliver the fish to the Science Center.

The research project is being conducted by Chuck Madenjian and is titled, "Effect of activity on bioenergetics model performance in the laboratory." In the study, the fish will be broken into two groups. One group will be placed in a channeled velocity of water and fed specific amounts of feed to see how much is needed to maintain a desired body weight. The second group will be placed in a minimum flow tank of water and measured how much energy is spent obtaining food. The project is being funded by a grant through the Great Lakes Fishery Commission.

Hatchery personnel look forward to the results of the study to see how the lake trout performed during the trial.

For further info about the Pendills Creek NFH/Sullivan Creek NFH: http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/pendills.pdf

USGS and Sullivan Creek NFH Partner for Lake Trout Feed Trial

BY CRYSTAL LEGAULT-ANDERSON, PENDILLS CREEK NFH

Sullivan Creek National Fish Hatchery (NFH) near Brimley, Michigan, was chosen as a site for a U.S. Geological Survey (USGS) feed diet trial during the fall of 2009. The "official" title of the USGS study is "Effects of conjugated linoleic acid on lake trout reproduction, fatty acid deposition, and embryo survival and hatchability."

After the female 2001 Seneca Lake Wild strain of lake trout were spawned in October, a random group of 108 females were pit tagged by USGS personnel, then randomly split into four groups each held in their own section of raceway. USGS personnel also took egg, liver, fat and hindgut samples from four females for baseline testing. The USGS is supplying four feeds with different fat levels and levels of conjugated dienoic derivatives of linoleic acid (CLA) for the next two years. During the study, more samples of egg, liver, fat and hindgut will be analyzed, along with samples of fertilized eggs for development and hatchability. No eggs from these females will be used to provide production eyed eggs to any facilities, and all pens of females are downstream of all Sullivan Creek NFH's other lake trout brood fish, so their special diets will not impact the other fish. The purpose of the study is to assess both beneficial effects of CLA in a high fat diet on lake trout fertilization and development and the negative effects of a low fat CLA diet on fatty acid deposition in trout eggs. The project specifically targets both the adult fish and the embryo life history stages.

For further info about the Pendills Creek NFH/Sullivan Creek NFH: http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/pendills.pdf

2009 HAMP Data Arrives

BY ANDY STAROSTKA, COLUMBIA FWCO

Loss and alteration of aquatic habitats are principal factors in the decline of native fish and other aquatic resources and the loss of biodiversity. Seventy percent of the Nation's rivers have altered flows, and 50 percent of waterways fail to meet minimum biological criteria.

Electronic copies of the 2009 Habitat Assessment and Monitoring Program (HAMP) data have been returned from Missouri Department of Conservation (DOC). A total of 48,152 fish were collected while conducting various sampling for HAMP. Forty three pallid sturgeon were captured with 40 collected while conducting experimental sampling protocols in the early spring. HAMP also caught 4,336 shovelnose sturgeon and 9,003 native chubs during the 2009 field season. Native chubs have been found to be an important food item for juvenile pallid sturgeon in parts of the Missouri River.

-USFWS

Adam McDaniel holds a pallid sturgeon captured while stern trawling the Missouri River.

Columbia Fish and Wildlife Conservation Office's (FWCO) HAMP chub data set is likely the largest on the lower Missouri River and continues to provide useful information on the health of the river and success of U.S. Army Corps of Engineers constructed habitat. The most abundant fish species was channel catfish with 7,879 fish captured. Catfish combined, consisting of blue, channel or catfish too small to identify made up over a third of the total catch with 17,996 individuals. That's approximately 53,988 needle sharp spines that our crews handled and certainly represents some very sore fingers at day's end!

-USFWS

These young-of-the-year sturgeon were captured on the lower Missouri River while conducting habitat assessment work.

HAMP is part of a multi-program monitoring effort on the Missouri River to assist with the recovery of pallid sturgeon. Missouri DOC is responsible for electronic data entry and data base management for several pallid sturgeon related monitoring programs. Once entered, the data is returned to the individual field stations for analysis and production of reports, presentations and journal articles. These data were collected from the lower Missouri River between Kansas City and St. Louis from spring through late summer. The majority of effort was focused on 18 river bends between Kansas City and St. Louis, Missouri, but also included some additional sampling efforts on the river in an attempt to answer specific habitat related questions. These data will be summarized in an annual report and combined with the four previous years of data to provide insight on constructed habitat use by fishes and the role of hydrologic events on the lower Missouri River.

For further info about the Columbia FWCO: http://www.fws.gov/midwest/columbiafisheries/

Fish and Wildlife Service Family Supports Biologist Heading to Iraq

BY JOANNE GRADY, COLUMBIA FWCO

Columbia Fish and Wildlife Conservation Office (FWCO) and Big Muddy National Fish and Wildlife Refuge staff members rallied to support biologist Jeff Finley in his Army deployment ceremony. Captain Finley is the commanding officer of the 480th Preventative Medicine Medical Detachment. This Army Reserve unit was called up to serve a year's tour in Iraq. As the commanding officer, Jeff has been working full-time for the Army since May 2009 preparing his unit for deployment.

-Unknown

Columbia Fish and Wildlife Conservation Office's Jeff Finley poses with his new work vehicle. Captain Finley's Army Reserve Preventative Medicine unit is serving a year's rotation in Iraq.

Throughout the ceremony, a slide show played on the wall showing pictures of all the training exercises Jeff's unit had attended over the last year. The diversity of activities was impressive. While the soldiers trained in everything that covered their core mission, they also trained in various weapons and survival skills. The camaraderie the group had developed as they endured the courses was apparent in these photos. This will be vital to the success of their mission.

The deployment ceremony, much like a graduation, marked the end of the training and the beginning of their journey. Friends and family were present to send their loved ones off on their mission. Guest speakers discussed the history and roles of the unit. They discussed being prepared and the purpose of their departure. The highlight of the ceremony was when the soldiers in this unit recited the Soldier's Creed.

Our thoughts and prayers are with Jeff and his family as they spend this next year apart. We eagerly wait until next year when Jeff is able to return to his Fish and Wildlife Service family too. Jeff's 11 person unit is responsible for ensuring the health of the Army troops and addressing environmental contagions. The unit began in 1943 as a hospital ship platoon and was activated through 1945 out of the New Orleans port. The unit was moved to the Army Reserves in 1947 and activated until 1952 out of Butte, Montana. It was re-designated as a medical detachment in 1992. The unit has run out of Columbia, Missouri, since 1998; they were deployed to Afghanistan in support of Operation Enduring Freedom from 2004-2005.

The Fisheries Program relies on a broad range of professionals to accomplish its mission: biologists, managers, administrators, clerks, animal caretakers, and maintenance workers. Without their skills and dedication, the Fisheries Program cannot succeed. Employees must be trained, equipped and supported in order to perform their jobs safely, often under demanding environmental conditions, and to keep current with the constantly expanding science of fish and aquatic resource management and conservation.

For further info about the Columbia FWCO: http://www.fws.gov/midwest/columbiafisheries/

Volunteers at the La Crosse FHC

BY JOHN WHITNEY, LA CROSSE FHC

The La Crosse Fish Health Center (FHC) would like to welcome Kayla M. and Robert K. as new volunteers. Kayla is a senior at Logan High School in La Crosse, Wisconsin, and Robert is a senior at Holmen High School in Holmen, Wisconsin. Both students will be assisting staff in the histology lab and with parasite necropsies, but will be given other laboratory opportunities. Both volunteers will be here until the end of the school year.

-USFWS/SarahBauer

Corey Puzach (left) and volunteer Rob examine parasites from lake herring.

For further info about the La Crosse FHC: http://www.fws.gov/midwest/LaCrosseFishHealthCenter/

A Valuable Experience

BY COLBY WRASSE, COLUMBIA FWCO

During November, University of Missouri student Dylan Spruance job shadowed technician Colby Wrasse of the Columbia Fish and Wildlife Conservation Office (FWCO). Dylan was interested in experiencing field work on the Missouri River and also interested in fulfilling a class requirement. During the day Dylan was with us, we ran gill nets as part of the Pallid Sturgeon Population Assessment Program. Dylan got to experience the life of a deck hand as he picked fish, pulled in gill nets, weighed and measured fish, and did all the other dirty jobs expected of a field crew member. Although no pallid sturgeon were captured that day, we did capture several shovelnose sturgeon and other interesting native fish.

Job shadowing and volunteering in the natural resources field is important for students as they decide on their future careers plans. These experiences give students a realistic, up-close view of the field. Most times students love the experience and it serves as additional motivation; however, some students learn that this isn't the right career for them and it gives them time to change directions. Either way, volunteering and job shadowing is usually an insightful experience. We hope that Dylan got something out of his day on the river, and Columbia FWCO looks forward to continuing to work with the University of Missouri.

-USFWS/ColbyWrasse

A gill net full of shovlenose sturgeon provides a great experience for volunteers who help the Columbia Fish and Wildlife Conservation Office assess native fish populations in the Missouri River.

For further info about the Columbia FWCO: http://www.fws.gov/midwest/columbiafisheries/

[111th CONGRESS Senate Bills]
[From the U.S. Government Printing Office via GPO Access]
[DOCID: s817is.txt]
[Introduced in Senate]
111th CONGRESS
1st Session

S. 817

To establish a Salmon Stronghold Partnership program to conserve wild Pacific salmon, and for other purposes.

IN THE SENATE OF THE UNITED STATES

April 2, 2009

Ms. Cantwell (for herself, Ms. Murkowski, Mrs. Murray, Mrs. Feinstein, Mrs. Boxer, Mr. Wyden, Mr. Merkley, and Mr. Begich) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

A BILL

To establish a Salmon Stronghold Partnership program to conserve wild
Pacific salmon, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) Short Title.—This Act may be cited as the "Pacific Salmon Stronghold Conservation Act of 2009".

SEC. 2. FINDINGS; PURPOSES.

(a) Findings.—Congress makes the following findings:

(1) Several species of salmon native to the rivers of the United States are highly migratory, interacting with salmon originating from Canada, Japan, Russia, and South Korea and spending portions of their life history outside of the territorial waters of the United States. Recognition of the migratory and transboundary nature of salmon species has led countries of the North Pacific to seek enhanced coordination and cooperation through multilateral and bi-lateral agreements.

(2) Salmon are a keystone species, sustaining more than 180 other species in freshwater and marine ecosystems. They are also an indicator of ecosystem health and potential impacts of climate change.

(3) Salmon are a central part of the culture, economy, and environment of Western North America.

(4) Economic activities relating to salmon generate billions of dollars of economic activity and provide thousands of jobs.

(5) During the anticipated rapid environmental change during the period beginning on the date of the enactment of this Act, maintaining key ecosystem processes and functions, population abundance, and genetic integrity will be vital to ensuring the health of salmon populations.

(6) Salmon strongholds provide critical production zones for commercial, recreational, and subsistence fisheries.

(7) Taking into consideration the frequency with which fisheries have collapsed during the period preceding the date of the enactment of this Act, using scientific research to correctly identify and conserve core centers of abundance, productivity, and diversity is vital to sustain salmon populations and fisheries in the future.

(8) Measures being undertaken as of the date of the enactment of this Act to recover threatened or endangered salmon stocks, including Federal, State, and local programs to restore salmon habitat, are vital. These measures will be complemented and enhanced by identifying and sustaining core centers of abundance, productivity, and diversity in the healthiest remaining salmon ecosystems throughout the range of salmon species.

(9) The effects of climate change are affecting salmon habitat at all life history stages and future habitat conservation must consider climate change projections to safeguard natural systems under future climate conditions.

(10) Greater coordination between public and private entities can assist salmon strongholds by marshaling and focusing resources on scientifically supported, high priority conservation actions.

(b) Purposes.—The purposes of this Act are—

(1) to expand Federal support and resources for the protection and restoration of the healthiest remaining salmon strongholds in North America to sustain core centers of salmon abundance, productivity, and diversity in order to ensure the long-term viability of salmon populations—

(A) in the States of California, Idaho, Oregon, and Washington, by focusing resources on cooperative, incentive-based efforts to conserve the roughly 20 percent of salmon habitat that supports approximately two-thirds of salmon abundance; and

(B) in the State of Alaska, a regional stronghold that produces more than one-third of all salmon, by increasing resources available to public and private organizations working cooperatively to conserve regional core centers of salmon abundance and diversity;

(2) to maintain and enhance economic benefits related to fishing or associated with healthy salmon stronghold habitats, including flood protection, recreation, water quantity and quality, carbon sequestration, climate change mitigation and adaptation, and other ecosystem services; and

(3) to complement and add to existing Federal, State, and local salmon recovery efforts by using sound science to identify and sustain core centers of salmon abundance, productivity, and diversity in the healthiest remaining salmon ecosystems throughout their range.

Source is http://www.gpoaccess.gov/bills/index.html
Searched database by keyword = "fish"

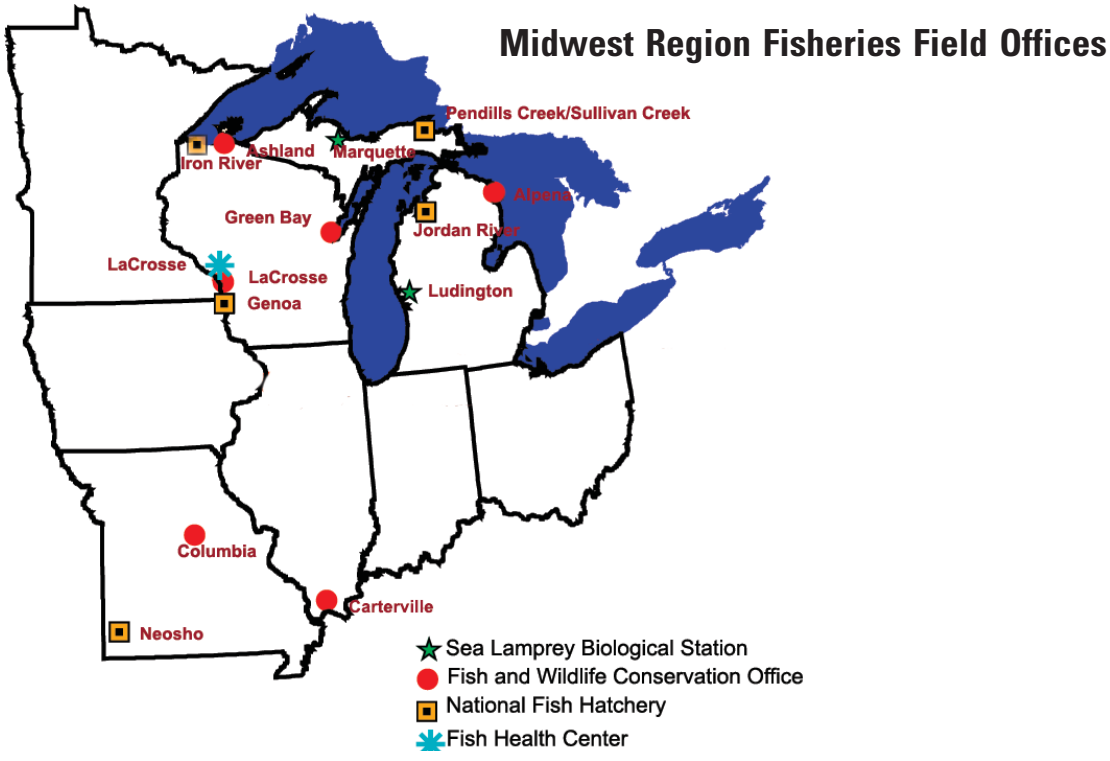
Midwest Region Fisheries Divisions

National Fish Hatcheries
The Region's National Fish Hatcheries primarily focus on native fish restoration/rehabilitation by stocking fish and eggs, such as pallid and lake sturgeon and by developing and maintaining brood stocks of selected fish strains, such as lake trout and brook trout. Hatcheries also provide technical assistance to other agencies, provide fish and eggs for research, stock rainbow trout in fulfillment of federal mitigation obligations and assist with recovery of native mussels and other native aquatic species.

Fish and Wildlife Conservation Offices
Fish and Wildlife Conservation Offices conduct assessments of fish populations to guide management decisions, perform key monitoring and control activities related to invasive, aquatic species; survey and evaluate aquatic habitats to identify restoration/rehabilitation opportunities; play a key role in targeting and implementing native fish and habitat restoration programs; work with private land owners, states, local governments and watershed organizations to complete aquatic habitat restoration projects under the Service's Partners for Fish and Wildlife and the Great Lakes Coastal Programs; provide coordination and technical assistance toward the management of interjurisdictional fisheries; maintain and operate several key interagency fisheries databases; provide technical expertise to other Service programs addressing contaminants, endangered species, federal project review and hydro-power operation and relicensing; evaluate and manage fisheries on Service lands; and, provide technical support to 38 Native American tribal governments and treaty authorities.

Sea Lamprey Biological Stations
The Fish and Wildlife Service is the United States Agent for sea lamprey control, with two Biological Stations assessing and managing sea lamprey populations throughout the Great Lakes. The Great Lakes Fishery Commission administers the Sea Lamprey Management Program, with funding provided through the U.S. Department of State, U.S. Department of the Interior, and Fisheries and Oceans Canada.

Fish Health Center
The Fish Health Center provides specialized fish health evaluation and diagnostic services to federal, state and tribal hatcheries in the region; conducts extensive monitoring and evaluation of wild fish health; examines and certifies the health of captive hatchery stocks; and, performs a wide range of special services helping to coordinate fishery program offices and partner organizations.



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Area of Responsibility (Michigan, Wisconsin)

Iron River National Fish Hatchery
10325 Fairview Road
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Dale Bast (*dale_bast@fws.gov*)
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LaCrosse Fish Health Center
555 Lester Avenue
Onalaska, WI 54650
Becky Lasee (*becky_lasee@fws.gov*)
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LaCrosse Fish and Wildlife Conservation Office
555 Lester Avenue
Onalaska, WI 54650
Pamella Thiel (*pam_thiel@fws.gov*)
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Area of Responsibility (Illinois, Iowa, Minnesota, Wisconsin)

Fish Tails

"Fish Tails" includes articles that are included in field station reports that are not published in the "Conservation Briefs." These articles are categorized by focus area and includes the article title, author and field station. The website link, where the full article can be viewed, is highlighted in blue type.

Partnerships and Accountability

- Columbia FWCO attends 70th Annual Midwest Fish and Wildlife Conference
  - Brian Elkington, Columbia FWCO

Aquatic Species Conservation and Management

- Excess Broodstock Released
  - James Anderson, Sullivan Creek NFH
- Fin Clipping Ends
  - Jaime Masterson, Pendills Creek NFH
- Lake Trout 2010 Year Class: Hatching at Jordan River NFH
  - Tim Smigielski, Jordan River NFH
- Pendills Creek NFH Receives Lake Trout Eggs
  - AJaime Masterson, Pendills Creek NFH

Aquatic Invasive Species

- Agents Wrap Up 2009 Spawning-Phase Sea Lamprey Trapping
  - Jessica Barber, Marquette Biological Station
- Fish Health Participates in Asian Carp Rapid Response Project
  - Sarah Bauer, La Crosse FHC
- La Crosse Area Fisheries Office Staff Assist with Asian Carp Rapid Response
  - Doug Aloisi, Genoa NFH
- Operation Silver Screen
  - Joe McMullen, Joshua Schloesser and Brian Elkington, Columbia FWCO
- The Asian Carp Battle Front... a Surreal Experience
  - Mark Steingraeber, La Crosse FWCO

Public Use

Cooperation with Native Americans

Leadership in Science and Technology

Aquatic Habitat Conservation and Management

Workforce Management

- College Tour at La Crosse Fish Health Center
  - Eric Leis, La Crosse FHC
- Emergency outreach: A labor of Love
  - Patricia Herman, Columbia FWCO
- Fish Health Center Staff Attend Region 3 Project Leaders and Administrative Professionals Meeting
  - Becky Lasee, La Crosse FHC

Neosho NFH Highlights

Neosho National Fish Hatchery (NFH) manager David Hendrix, Chief of Contracting Cathy Vanatta, Engineer Carol Fix and Deputy Assistant Regional Director Todd Turner met with Bass Pro Shops staff on January 13th. The purpose of the meeting was to create a partnership that utilizes Bass Pro's expertise to help Neosho NFH complete the new visitor center's aquarium display. In exchange, the Fish and Wildlife Service will donate fish to be displayed in Bass Pro Shop stores. Bass Pro's vice president, CEO and three directors attended the meeting while Bass Pro Shops founder John Morris attended the meeting by phone.